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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Dieter Husar

SERIAL NO.: 09/486,531

FILED: May 22, 2000

FOR: MICROPROPORTIONING SYSTEM

EXAMINER: Brian R. Gordon GROUP: 1743

Commissioner for Patents
Washington, D.C. 20231

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TC 1700

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 CFR sections 1.97 and 1.98, applicant respectfully requests that the documents listed on the attached form PTO-1449, be made of record and considered in connection with the examination of this application. Copies of the listed document are enclosed. A translation of the foreign language document(s) is not readily available.

The documents submitted herewith were cited in an International Search Report, (which was filed together with the application papers) and by the German Patent Office in a German application corresponding to the above-referenced application.

02/19/2003 SSESHE1 00000021 500955 09486531

02 PG.1606 100.00 CH

U.S. Patent No. 4,636,814 discloses an ink supply device for a printing apparatus.

U.S. Patent No. 4,938,742 discloses a piezo-electric micropump with microvalves.

U.S. Patent No. 5,316,452 discloses a dispensing assembly with an interchangeable cartridge pump.

U.S. patent No. 5,370,842 (corresponds to EP 0 545 284 A cited in the Search Report) discloses a sample measuring device and a sample measuring system.

U.S. Patent No. 5,683,658 (corresponds to EP 0 753 746 cited by the German Patent Office) discloses a reagent bottle.

U.S. Patent No. 5,805,189 (corresponds to DE-44 43 290 cited by the German Patent Office) discloses a device for fluid supply of a micrometering device.

U.S. Patent No. 5,916,524 discloses a dispensing apparatus having an improved dynamic range.

U.S. Patent No. 6,280,148 (corresponds to DE-197 06 513) cited by the German Patent Office) discloses a microdosing device and a method of operating it.

International Publication WO 97/24528 discloses a multichannel microdosing apparatus.

European Patent EP 0 672 834 discloses a microfluid manipulator including a micro droplet emitter (3) connected to a fluid reservoir, and a microfluid diode (6) connected with the emitter (3) via a droplet chamber (5) through which fluid passes only in one direction.

European Patent EP 0 725 267 discloses an electrically controlled micropipette including a micromembrane pump (2) having a chamber (7) with electrically driven actuator (12), and an elastic chamber wall (14); and a microdischarge capillary (4) forming a pipette tip and connected to the chamber (7).

British Patent Publication GB 2,216,259 discloses a dispenser for a chemical analysis carrying a code.

German Patent Publication DE 41 40 533 discloses an apparatus for micrometering of a lubrication oil and including a lubricant chamber (2) having an outlet nozzle (9) and an electromechanical converter (W) formed as a piezoceramic drive element intermittently connected with a voltage source, with the converter deforming upon a change in voltage, providing for ejection of a smallest dose (D) through the nozzle.

German Patent Publication DE 195 11 198 discloses a method of producing functional parts of a micrometering system in which the functional parts (46, 48, 50, 54, 56, 58), which are defined by elements (16, 18, 20, 24), are formed as integrated elements of a wafer (10).

Japanese Patent No. JP-08 233710 discloses a sample preparation apparatus (an English Abstract is attached).

Japanese Publication JP-08 219 956 discloses a pipette (an English Abstract is attached).

An article by Roland Zengele "Mikrosysteme – Chancen für die Dosier-technik" (Mycrosystems – Use in Metering Technology), Wagen und Dosieren, 1996, v. 1 presents a review of micropumps, flow sensors, mixers, etc., . . . and discloses, *i.e.*, a membrane micropump (Fig. 1) including a displacement unit (4) with a piezoelectrically, thermally or electrostatically driven membrane (3) for pumping fluid from an inlet (1) to an outlet (2) through the chamber (5). The pump has a drive chamber (8) and a backplate electrode (9).

A report of H. Sandmaier, "Konzept eines Integrierten Micro-analysensystems für die Benasserüberwachung." (Concept of an Integrated Microanalyzing System for Water Quality Monitoring), Sensor 93 Kongress, discloses an analysis module (Fig. 3) with replaceable sensors and including a base

(1) with a fluid connection (2), an integrated channel system (3) with electrical wiring, a conductive seal (4), sensors (5), sensor fixing means (6), pump (7), microconnector (8), and a seal (9).

The Commissioner is hereby authorized to charge the fee required under 37 C.F.R. § 1.17 (p) in the amount of \$180.00 and any other fees, which may be required, to our Deposit Account No. 50-0955.

Respectfully submitted,

David Toren
Reg. No. 19,468

Dated: February 13, 2003
Sidley Austin Brown & Wood LLP
787 Seventh Avenue
New York, New York 10019
Tel: (212) 839-7365

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail and addressed to: Commissioner for Patents, Washington, D.C. 20231 on February 13, 2003.

February 13, 2003.

